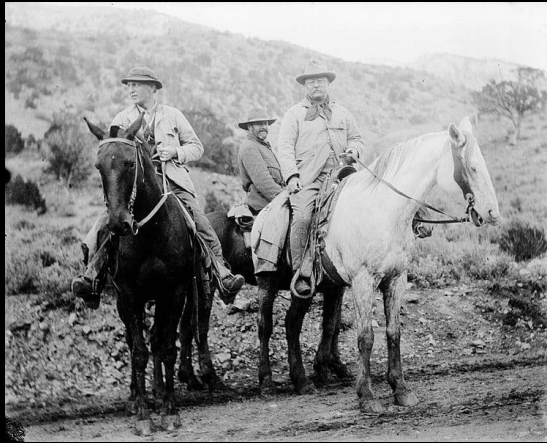


The North American Model of Wildlife Conservation: Past, Present & Future



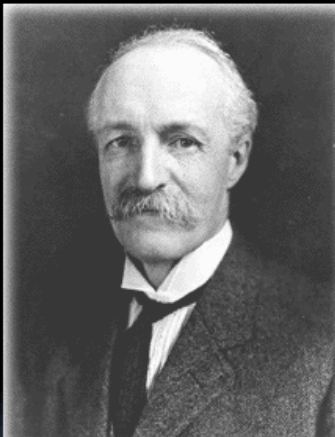
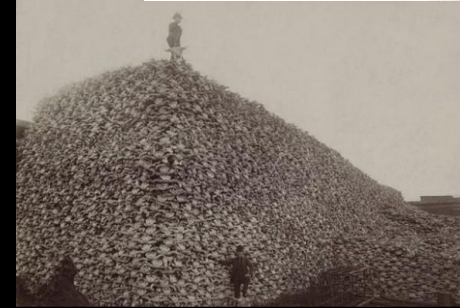
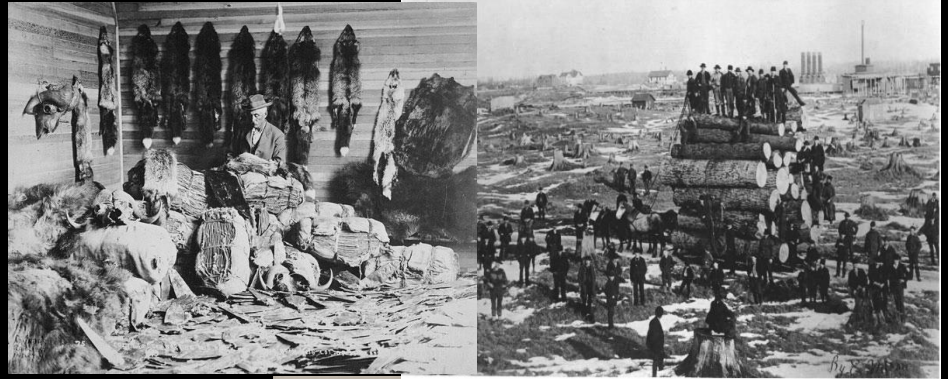
Dr. Lincoln Larson
**Dept. of Parks, Recreation &
Tourism Management**

**NC STATE
UNIVERSITY**

College of
Natural Resources

The Rise of “Conservation”

- Until early 1900s, resources exploited for economic gain without conscience or consequences



Gifford Pinchot

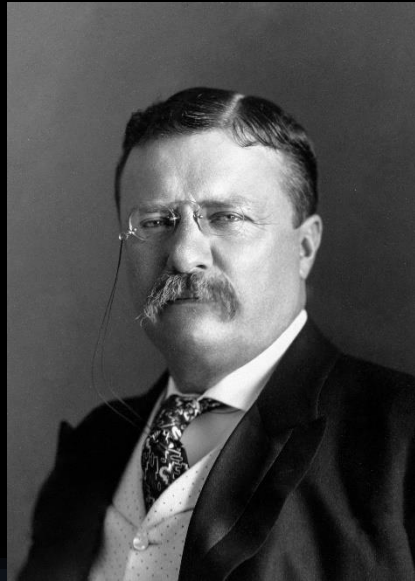
Conservation:

“the greatest good for the greatest number in the long term”

-Pinchot (1905)

Emergence of the North American Model (NAM)

North American
Model of
Wildlife Conservation



Teddy Roosevelt



Aldo Leopold

The North American Model
of Wildlife Conservation



Technical Review 12-04
December 2012



Core Elements of NAM

- **Wildlife as a public trust resource**
- **Public trust doctrine: Wildlife resources are publicly owned and entrusted to the government (as trustee) to be managed on behalf of the public (as beneficiaries)**
 - **1842 – *Martin v. Waddell*** – public holds a common right to fish in navigable waters
 - **1896 – *Geer v. CT*** – wildlife (“wild fowl”) included within state’s trustee responsibilities
 - **1971 – *Marks v. Whitaker*** – ecological protection is a public interest afforded oversight by the doctrine
 - Later rulings expand definition to include wildlife habitat, protection from invasive species, recreational activities, aesthetic and cultural values, etc.

Public Trust Doctrine in NC

N.C. Gen. Stat. §113-131:

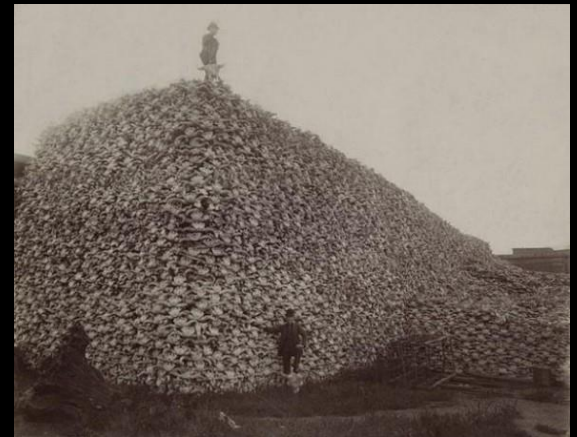
“The marine and estuarine and wildlife resources of the State... and the enjoyment of the wildlife resources of the State... **belong to the people of the State as a whole.**”

N.C. Gen. Stat. §113-133.1:

“The Dept. and the WRC is charged with administering the governing statutes in a manner **to serve as equitably as may be the various competing interests of the people regarding wildlife resources**, considering the interests of those whose livelihood depends upon full and wise use of renewable resources and the interests of the many whose approach is recreational.”

Core Elements of NAM

- **Elimination of markets for wildlife**
 - Discourages & restricts privatization or commercialization of wildlife
 - Establishes “legitimate” reasons for killing wildlife



Core Elements of NAM

- **Science-based policy & decision-making**
- **Allocation of wildlife by law**
- **Democracy of hunting**
 - **All citizens have the right and should be afforded opportunities to hunt (and fish)**



Central Role of Hunters in NAM

“It is hunters or, more accurately, *hunting*, that led to the components that form the foundation for North American wildlife conservation.”

-Geist et al. (2001)

■ Search of Organ et al.’s (2012) Technical Review of NAM revealed:

- **143 occurrences of terms referring to hunting** (hunt, hunters, etc.)
- **4 occurrences of terms referring to non-hunting** participants and activities (non-hunter, bird watcher, wildlife watching, etc.)

“Hunters are privileged in the current NAM while other interested stakeholders are underrepresented and underserved.”

-Decker et al. (2009)

Hunters Have Historically Funded NAM



Pittman-Robertson
Act (1937)



Duck Stamp
Act (1934)



Dingell-Johnson
Act (1950)



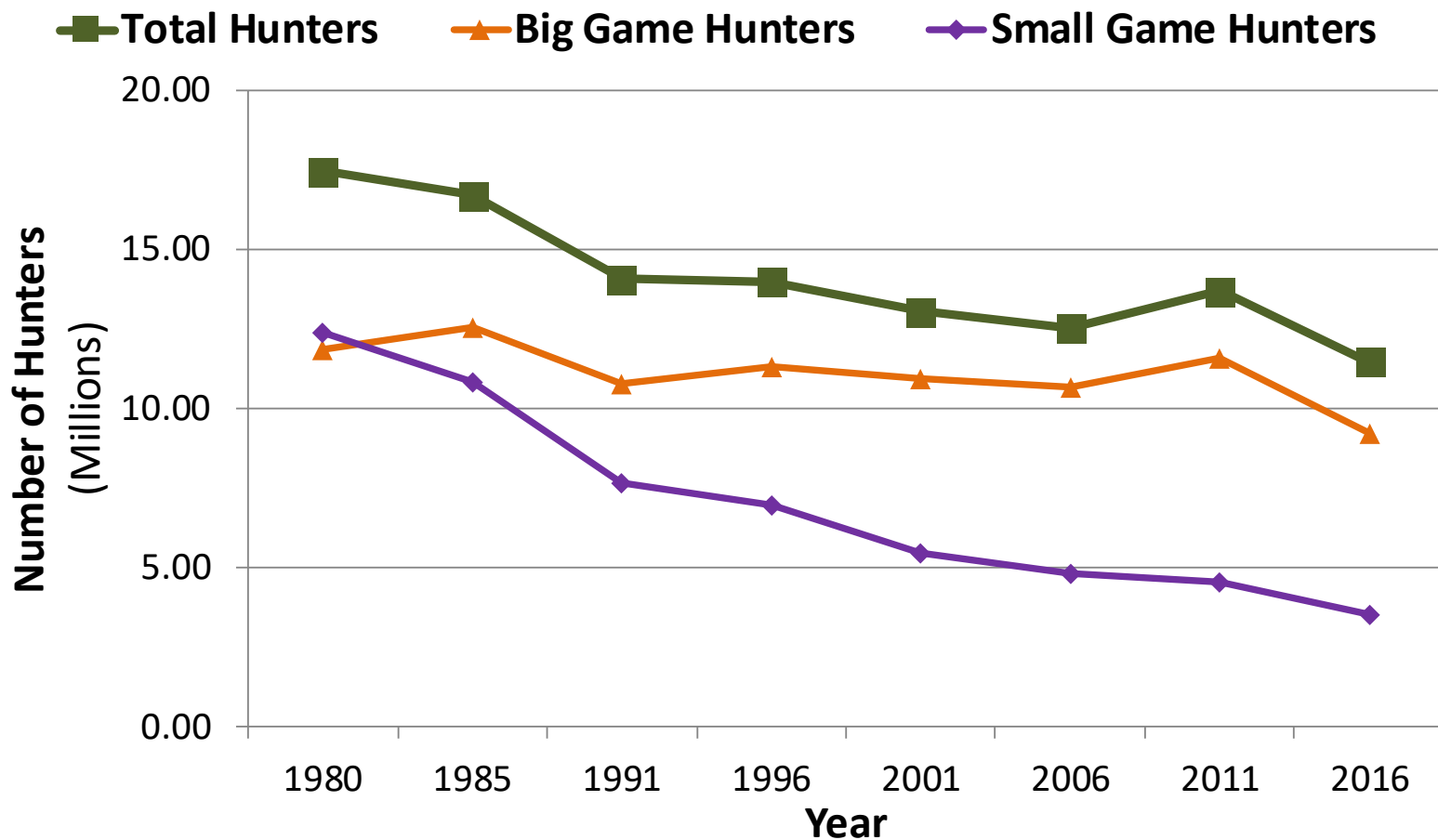
- Hunting = centerpiece of **“user-pay, user benefit”** conservation funding system
 - P-R Act alone has contributed >\$10 billion to state agencies for land acquisition & wildlife restoration projects/activities
 - ~60% of state agency budgets comes from hunting & angling

“Hunting and angling are the cornerstones of the North American Model, with **sportsmen and women serving as the foremost funders of conservation** [through excise taxes and license fees they pay].”

-AFWA (2017)

Problem:

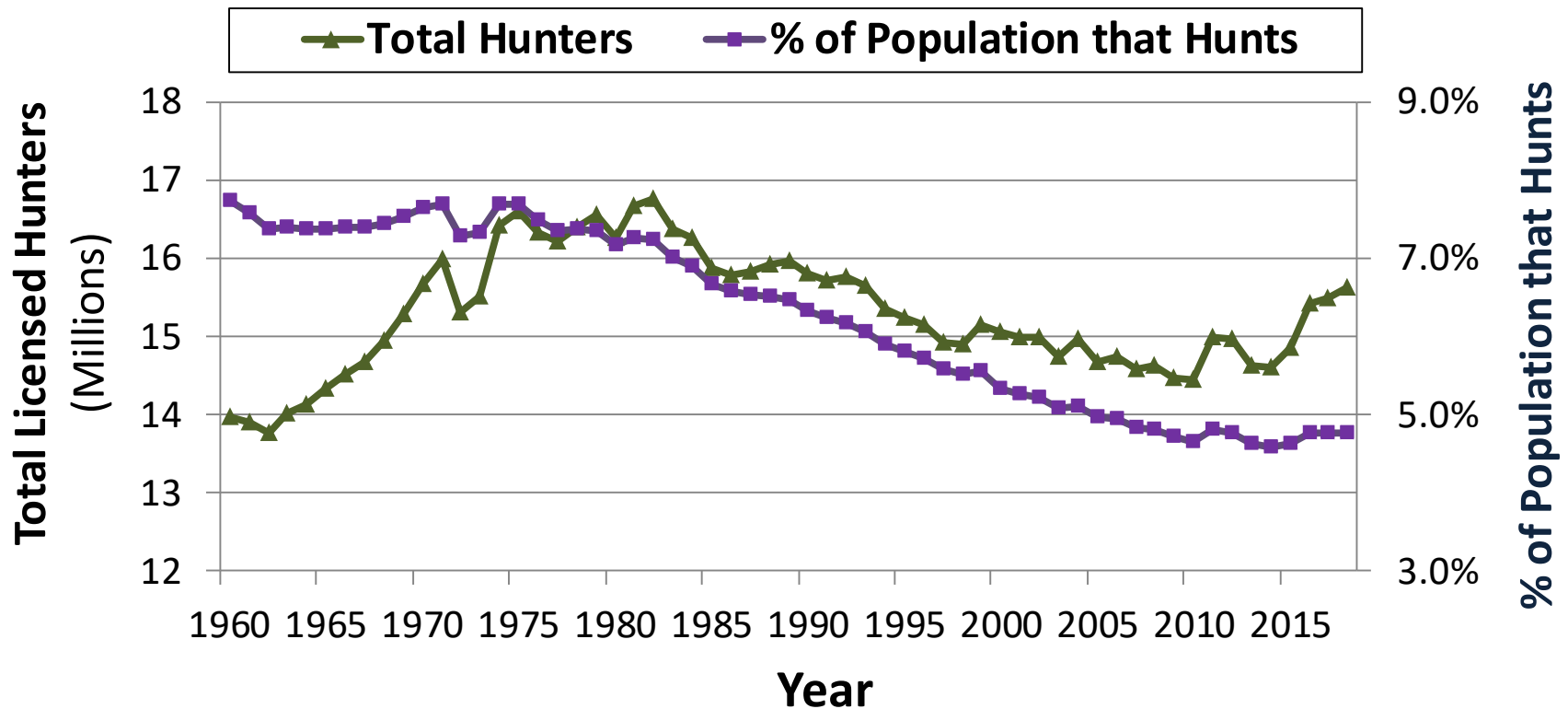
Hunting participation is declining...



Source:
USFWS
National
Survey

Problem:

Hunting participation is declining...

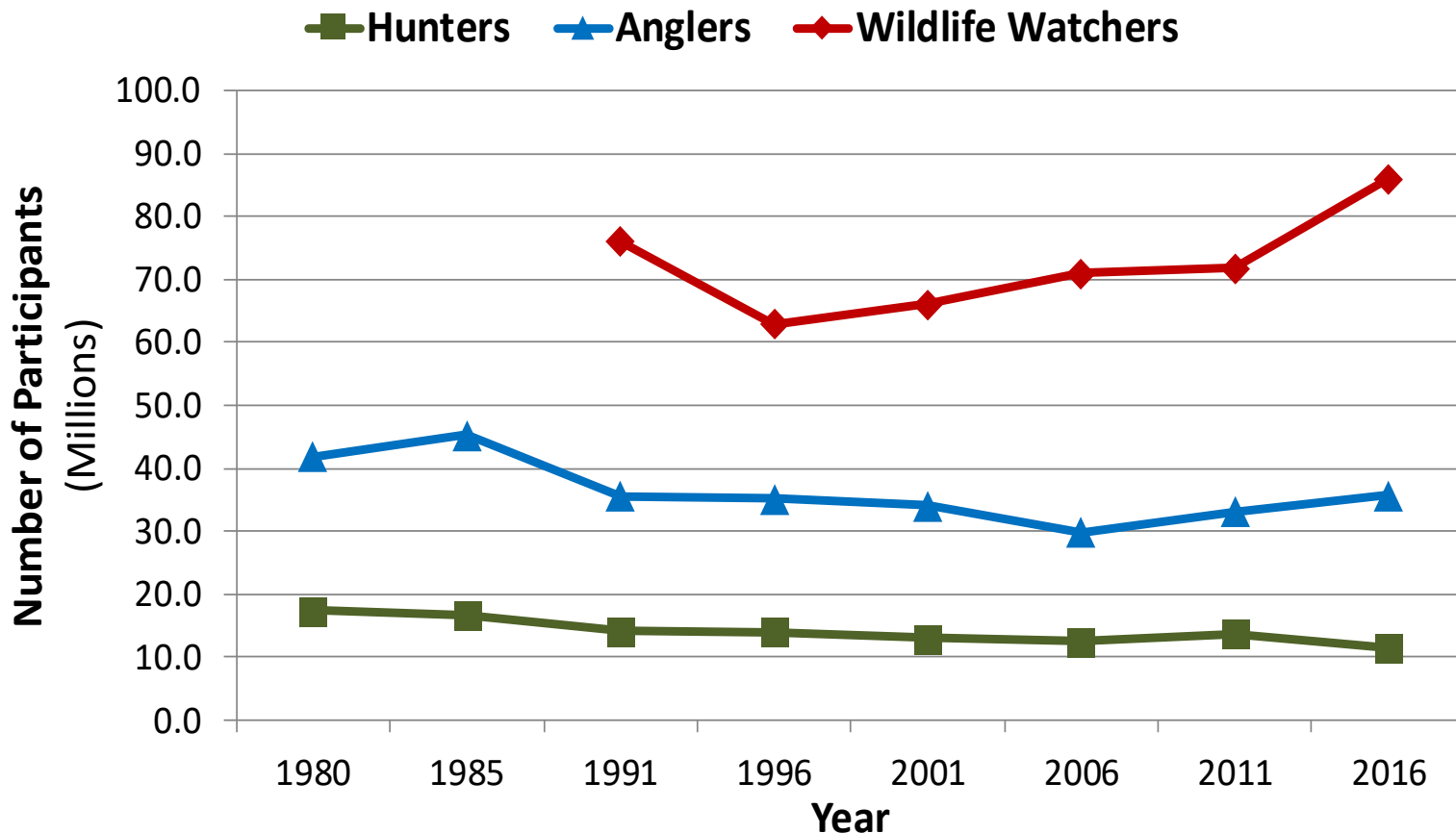


Source: USFWS Wildlife & Sportfish Restoration Program



... while other activities
become more popular

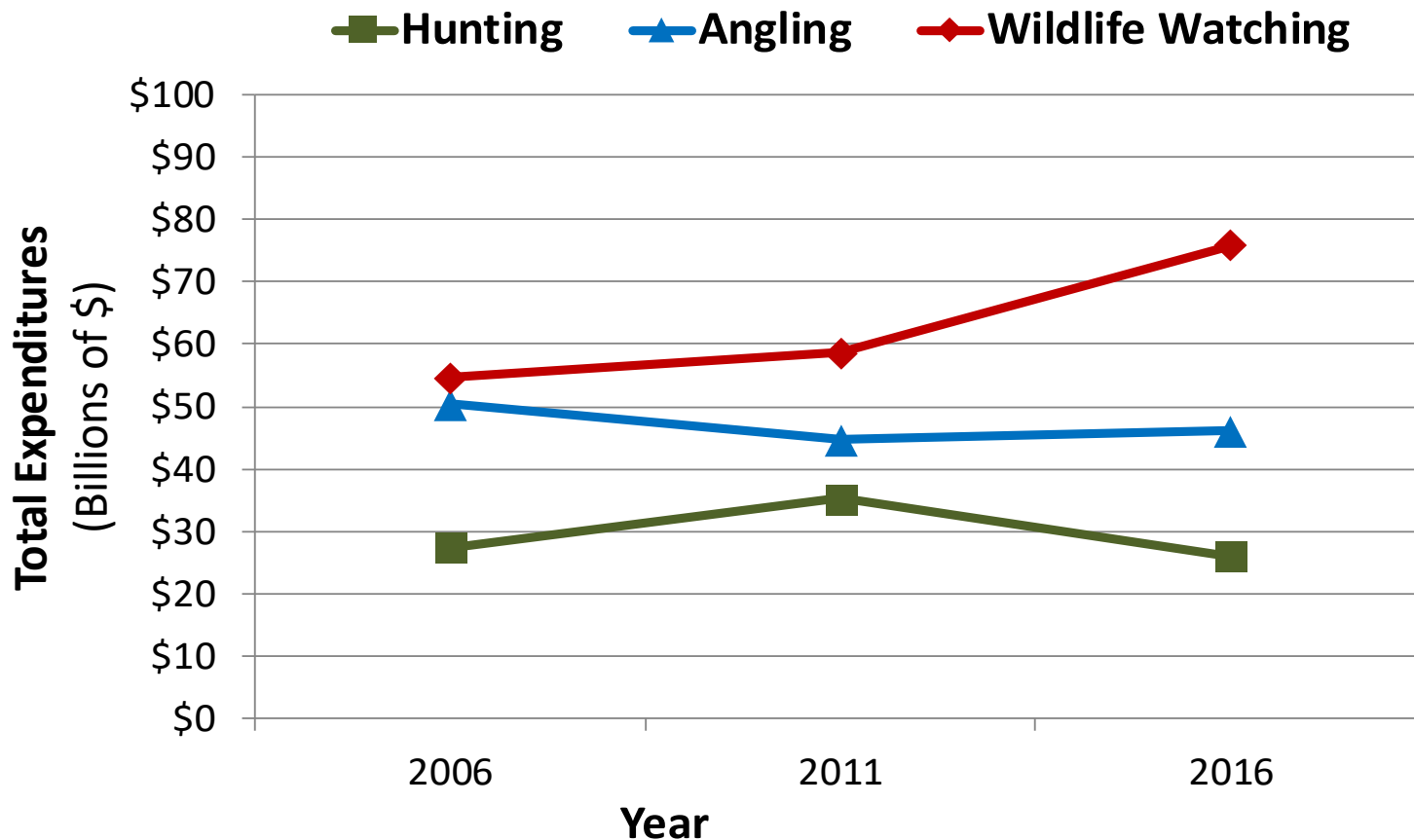
Total Recreation Participants in the United States



Source:
USFWS
National
Survey

... while other activities
become more popular

Total Recreation Expenditures in the United States



Source:
USFWS
National
Survey

Uncertain Future for Hunting-centric Conservation Model

The Right to Hunt Is Now Constitutionally Protected in North Carolina

The state is the latest where voters have weighed in on the debate.

BY CANDICE NORWOOD | NOVEMBER 7, 2018 AT 10:50 AM

Connecticut Bill Gives Local Governments Authority to Regulate Hunting and Trapping

Posted on January 21, 2019

NATIONAL

Decline In Hunters Threatens How U.S. Pays For Conservation

March 20, 2018 · 6:31 AM ET

Heard on [All Things Considered](#)



Uncertain Future for NAM

“Without widespread societal support for conservation in its broadest sense, the NAM as we know it today will be inadequate.”

-Decker et al. (2009)

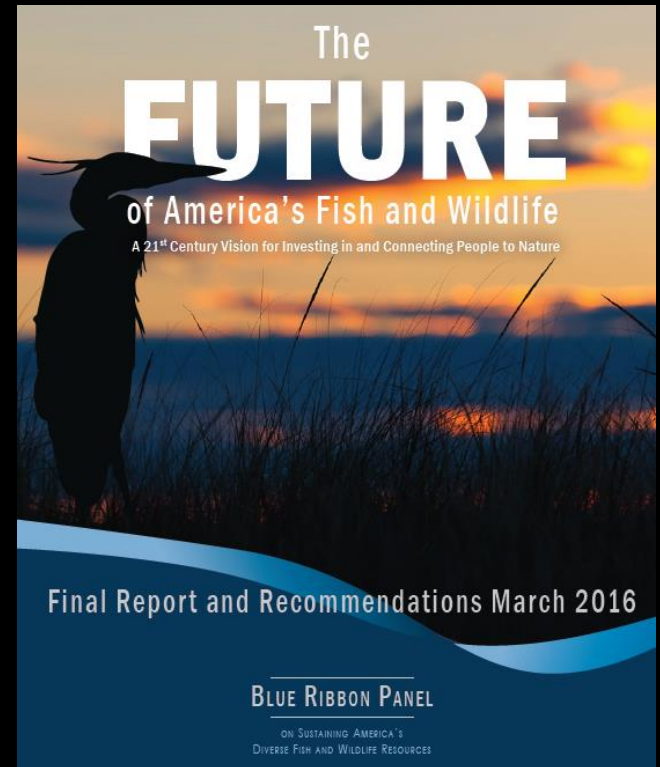
Two Potential Responses...

1. Recruit new hunters

- Focus on non-traditional paths into hunting

2. Broaden the base of support for conservation

- Focus on engaging different types of stakeholders
- Adapt current conservation funding structure



1. Recruiting New Hunters

- As “traditional” hunting populations decline, **growing focus on R3** (recruitment, retention, reactivation) **efforts targeting non-traditional path hunters**
 - Women
 - Racial/ethnic minorities
 - Locavores



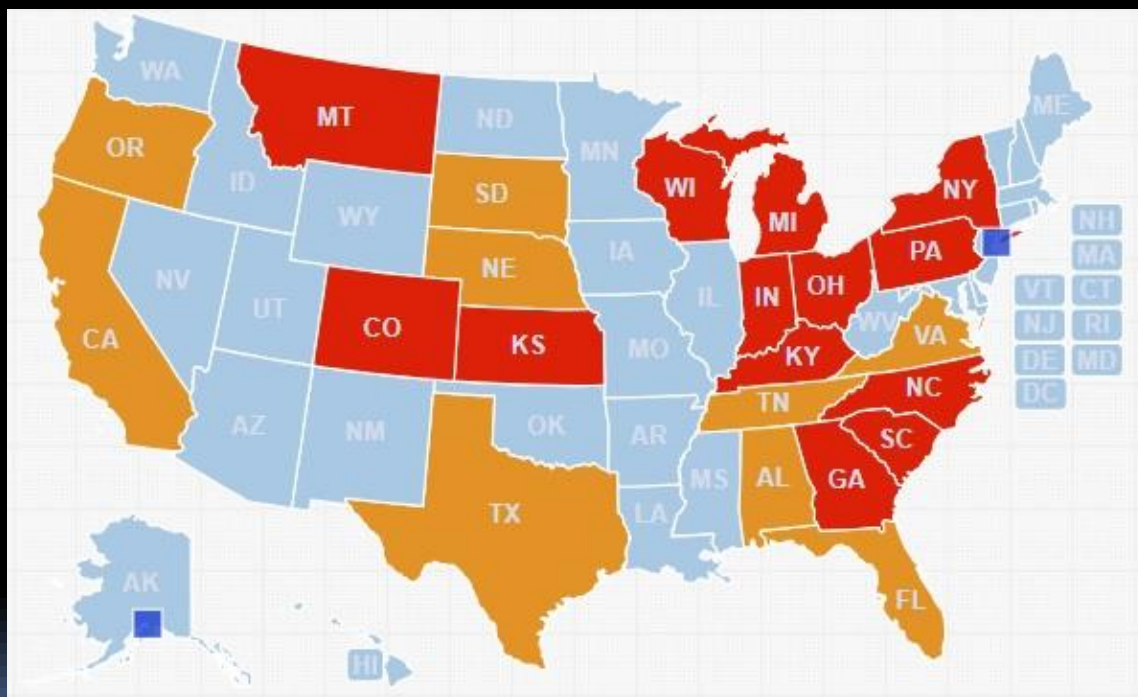
Our Current Study: College Students & Hunting

- Survey diverse undergrad students to assess hunting-related perceptions & behaviors
- Use info to develop, implement & evaluate R3 workshops for students without previous hunting experience



Year 1 (13 states)

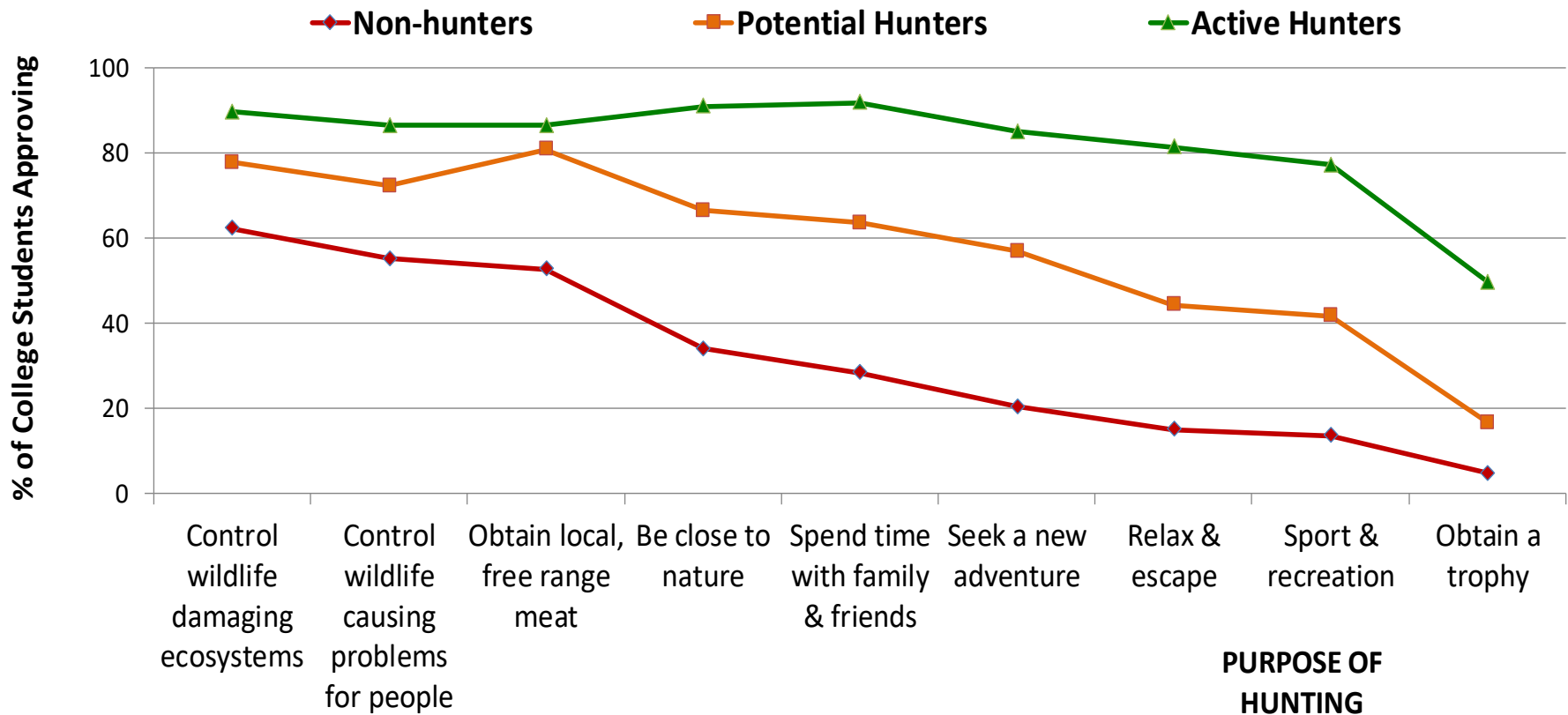
Year 2 (9 states)





Our Current Study: College Students & Hunting

Approval of Hunting for Various Purposes

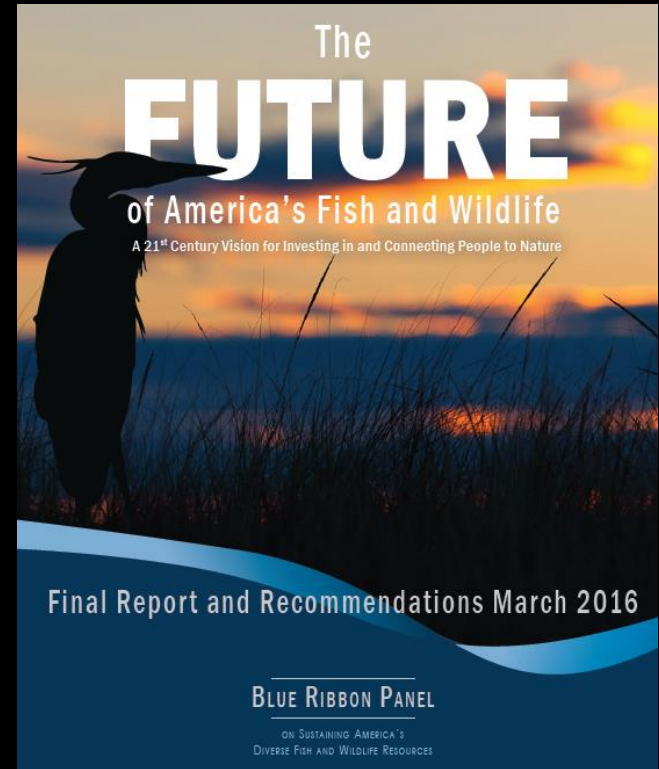


NOTE: These data are from pilot surveys at Clemson and Kansas State

2. Broadening the Base...

“Although core constituencies like hunters and anglers will continue to be key allies, there is a **need to broaden stakeholder representation** to ensure fish and wildlife conservation remains relevant and supported by people from all walks of life.”

-Blue Ribbon Panel (2016)

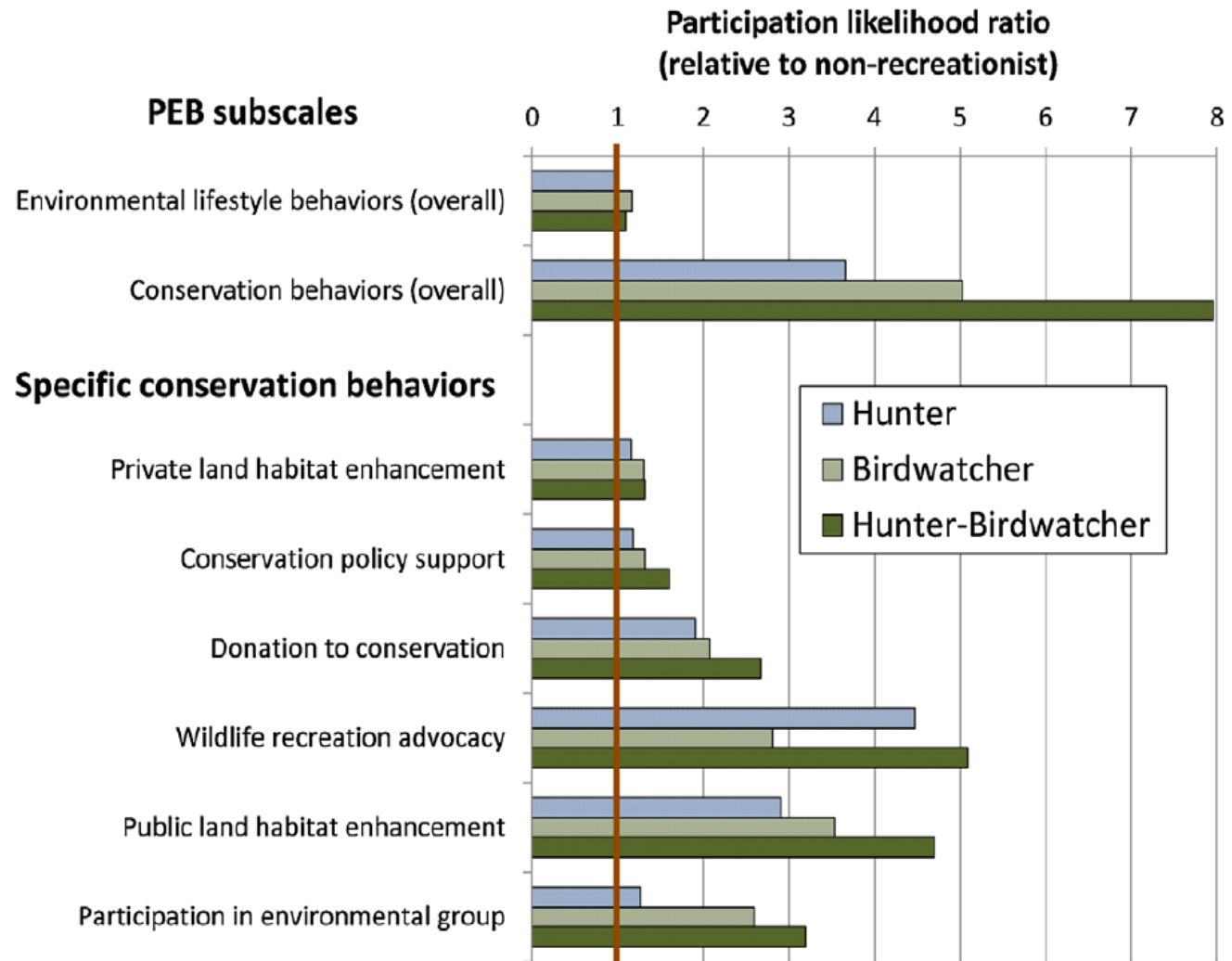


- **Be wary of exclusivity that casts hunters as unique, preferred class of conservationists**
(Serfass et al., 2018)

Non-hunters are Conservationists too

Wildlife-based recreationists' relative likelihood of participating in conservation behaviors compared to non-recreationists (NY, 2013)

Source:
Cooper et al.,
2015



Non-hunters Contribute in Other Ways...

- **Non-hunters buy guns/ammo, contributing to P-R funds**
 - About 50% of Americans participating in shooting sports don't hunt
- **Everyone contributes to America's public lands**
 - Non-hunting public contributes 95% of annual \$18.7 billion costs associated with federal public lands (Smith & Molde, 2005)
- **Lack of financial support ≠ lack of philosophical support for conservation among non-hunters**



Can we create new systems to facilitate contributions from non-hunters?

- Since the 1970s, there have been many efforts to foster holistic approaches to funding conservation at the state level
 - **Excise tax on “other” outdoor recreation gear** such as binoculars, tents, kayaks, etc. (TX)
 - **Lottery revenues** (CO, OR)
 - **Oil & gas revenues** (AL, MI)
 - **Various bond measures** (CA, RI, OH)
 - **Real estate transfer tax** (FL, NY)
 - **Corporate business tax** (NJ)
 - **State sales tax** (AR, MO, MN)

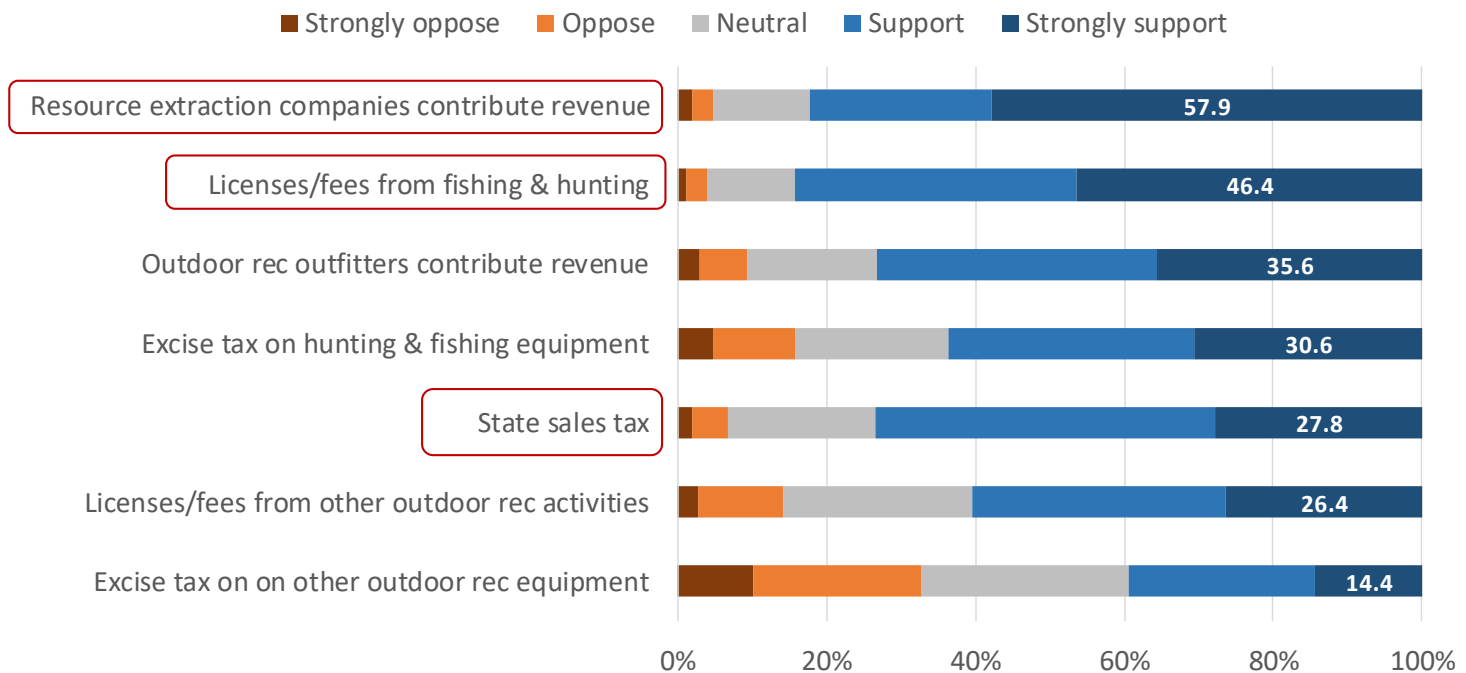


Can we create new systems to facilitate contributions from non-hunters?

- **Proposed Recovering America's Wildlife Act**
 - Builds on Blue Ribbon Panel's (2016) suggestion to dedicate up to \$1.3 billion annually in revenues from energy production and mining on federal lands/waters to support conservation

- **What do college students support?**

College Students' Support for Different Conservation Funding Options



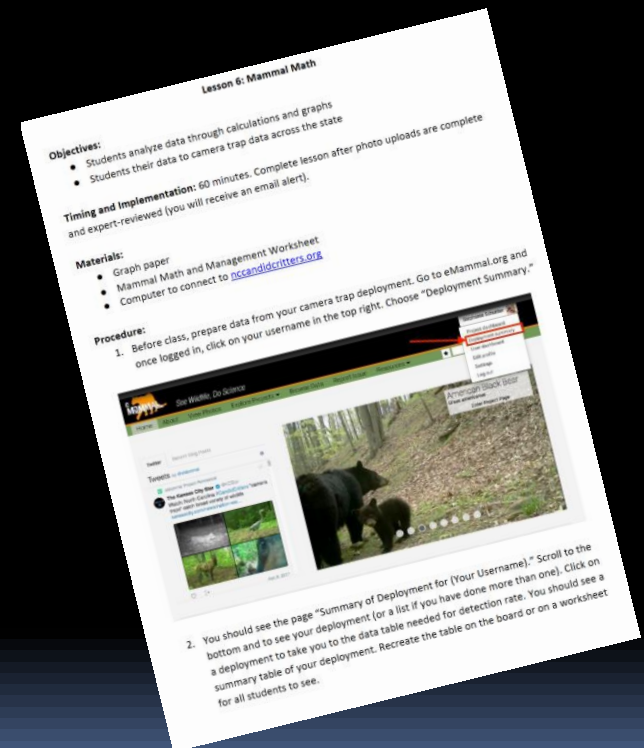
Source:
Larson et al.,
2018

How can state agencies engage diverse stakeholders?

- **Example: NC Candid Critters citizen science project**
 - <20% of participants are hunters
 - ~40% of participants reported increased awareness of NC WRC



Source:
Pedrozo et al.,
2018



How can states engage diverse stakeholders?

- Be proactive by:

- Recruiting non-traditional hunters and anglers
- Making game AND non-game species management part of North American conservation model (Madson, 2019; Organ et al., 2012)



- Engaging with “other” (non-hunting) audiences in new & creative ways
 - **Think public interest vs. special interest**

How can states engage diverse stakeholders?

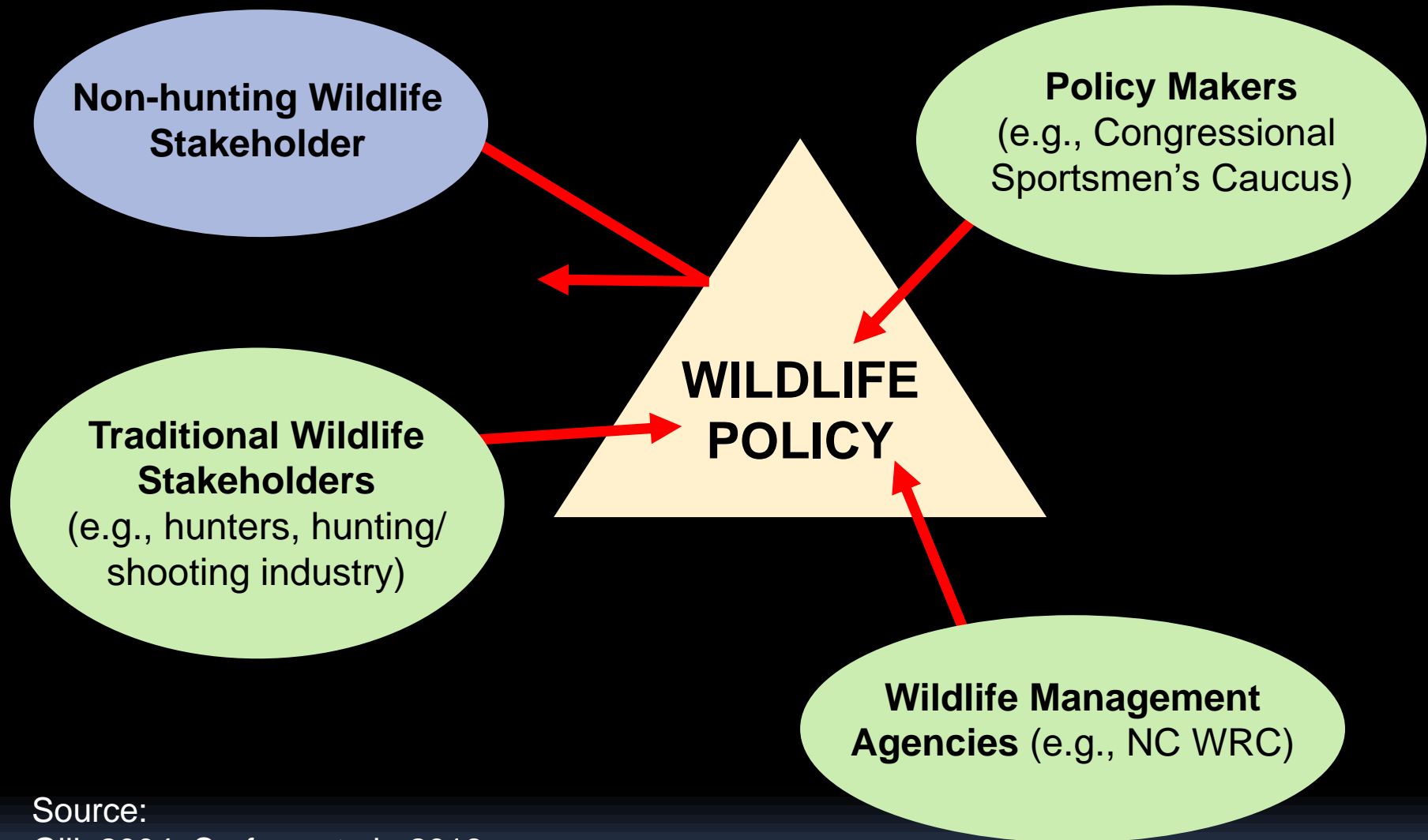
- Be wary of:
 - Resistance from traditional stakeholders if wildlife governance systems are altered to accommodate non-hunters & biodiversity-focused conservation goals (Manfredo et al., 2017)

Bill Proposes Limiting Citizen Input On FWP Decisions

By CORIN CATES-CARNEY • JAN 22, 2019

Tschida said the bill had one prime purpose: “to eliminate a position whose job, it appears to be, is to solicit ‘feelings’ people have about hunting, trapping and fishing.”

Expand the “Iron Triangle”



Source:
Gill, 2004; Serfass et al., 2018

Building a Broader Conservation Community



“A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.” -Leopold (1933)

- **We are all part of the conservation community**
- **Great potential to capitalize on common ground around core goals... if our system & institutions facilitate and incentivize such collaboration**

Acknowledgments

- Dan Decker
- Gordon Batcheller
- John Organ
- Nils Peterson
- Daniel Choi



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